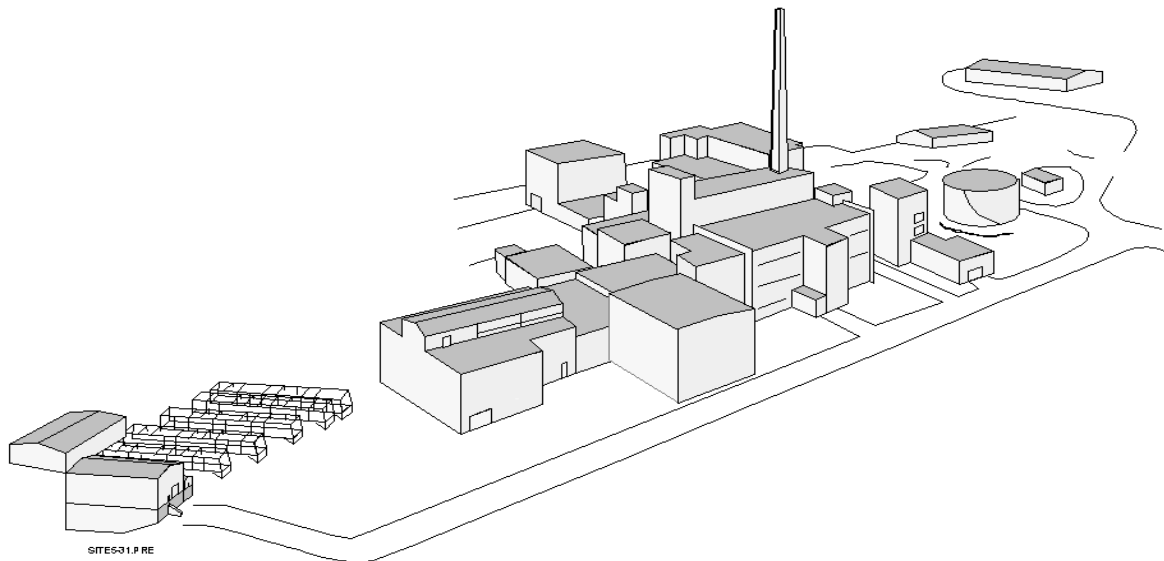

WEST VALLEY DEMONSTRATION PROJECT ANNUAL SITE ENVIRONMENTAL REPORT CALENDAR YEAR 2006



**WEST VALLEY NUCLEAR SERVICES COMPANY
AND
URS GROUP, INC.**



Prepared by: West Valley Nuclear Services Co. and URS Group, Inc.
Prepared for: U.S. Department of Energy
DOE-WVDP

Under: Contract DE-AC24-81NE44139

September 2007
10282 Rock Springs Road
West Valley, New York 14171-9799



Department of Energy

West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

To the Reader:

This report, prepared by the U.S. Department of Energy (DOE) West Valley Demonstration Project (WVDP), summarizes the environmental protection program at the WVDP for calendar year 2006.

Monitoring and surveillance of the WVDP facilities are conducted to verify that public health and safety and the environment are protected. The quality assurance requirements applied to the environmental monitoring program by the DOE ensure the validity and accuracy of the monitoring data.

At the WVDP, radiological air emissions are controlled and permitted by the U.S. Environmental Protection Agency (EPA) under National Emission Standards for Hazardous Air Pollutants, Subpart H, regulations. Nonradiological liquid effluent discharges are controlled and permitted through the New York State Pollutant Discharge Elimination System.

Air, surface water, groundwater, storm water, drinking water, soil, sediment, and biological samples are collected and analyzed for radiological and nonradiological constituents. The resulting data are evaluated to assess effects of activities at the WVDP on the nearby public and the environment. Radiological monitoring of treated water effluents and facility ventilation system emissions verified that the dose received by off-site residents continues to be minimal.

The calculated dose to the hypothetical maximally exposed off-site individual from airborne radiological emissions in 2006 was much less than one-tenth of one percent of the EPA limit. The dose from combined airborne and waterborne radiological releases in 2006 to the same individual was less than one-tenth of one percent of the DOE limit.

The Project's continuing commitment to safety was reaffirmed in 2006 when it was recertified as a DOE-Voluntary Protection Program (VPP) STAR site and continued its membership in the EPA's National Environmental Performance Track. The WVDP is one of the few DOE sites to be awarded both the VPP STAR and National Environmental Performance Track membership. By the close of 2006, WVDP employees achieved 4.5 million safe work hours over four years without a lost time work accident.

On June 29, 2007, the DOE awarded a four year contract for management and operation of the WVDP to West Valley Environmental Services Company, LLC, a team led by Washington Group International. The new team is focusing on transition activities to ensure the continuation of safely managed environmental cleanup and waste management activities.

If you have any questions or comments about the information in this report, please contact the WVNSCO Communications Department at (716) 942-2152 or complete and return the enclosed survey.

Sincerely,

A handwritten signature in dark ink, appearing to read "B.C.B.", is written over a horizontal line.


Bryan C. Bower, Director
West Valley Demonstration Project



Preface

Environmental monitoring at the West Valley Demonstration Project (WVDP) is conducted by the West Valley Nuclear Services Company, under contract to the U.S. Department of Energy. The data collected provide a historical record of radionuclide and radiation levels and chemical data from natural and man-made sources in the survey area. The data also document the chemical and radiological quality of the groundwater on and around the WVDP and of the air and water released by the WVDP. Meteorological data are also presented.

It is the policy at the WVDP to conduct all activities, including design, construction, testing, start-up, commissioning, operation, maintenance, and decontamination and decommissioning, in a manner that is appropriate to the nature, scale, and environmental effects of these activities. The WVDP management is committed to full compliance with applicable federal, New York State, and local laws and regulations for the protection of the environment, to continual improvement, to the prevention and/or minimization of pollution, and to public outreach, including stakeholder involvement.

This report represents a single, comprehensive source of on-site and off-site data collected during 2006. The environmental monitoring program and results are discussed in the body of this report. Additional monitoring information is presented in the appendices. Appendix A contains maps of on-site and off-site sampling locations. Appendices B through K can be found in electronic format on the compact disk (as indicated by the  icon) located inside the back cover. Appendix B is a summary of the site environmental monitoring schedule. Appendices C through J contain summaries of data obtained during 2006 and are intended for those readers interested in more detail than is provided in the main body of the report. Appendix K contains a copy of the West Valley Demonstration Project Act.

Requests for additional copies of the 2006 Annual Site Environmental Report and questions regarding the report should be referred to the WVDP Communications Department, 10282 Rock Springs Road, West Valley, New York 14171 (telephone: 716-942-2152). Additional Project information, including WVDP site environmental reports, is available on the internet at <http://www.wv.doe.gov>.

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West Valley Demonstration Project Annual Site Environmental Report for Calendar Year 2006

Prepared for the U.S. Department of Energy

West Valley Demonstration Project Office

under contract DE-AC24-81NE44139

September 2007

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SUMMARY OF CHANGES TO THE 2006 WVDP ANNUAL SITE ENVIRONMENTAL REPORT FROM THE 2005 ANNUAL SITE ENVIRONMENTAL REPORT

This report, prepared by the U.S. Department of Energy West Valley Demonstration Project office (DOE-WVDP), summarizes the environmental protection program at the WVDP for calendar year (CY) 2006. Monitoring and surveillance of the facilities used by the DOE for the WVDP are conducted to verify protection of public health and safety and the environment. The quality assurance protocols applied to the environmental monitoring program by the DOE ensure the validity and accuracy of the monitoring data.

Changes in content for the 2006 Annual Site Environmental Report (ASER) are summarized below.

REVISIONS

- The Environmental Compliance Summary was updated for CY 2006 to describe continued implementation of the WVDP environmental management system.
- Environmental permits effective during CY 2006 were updated. A modified State Pollution Discharge Elimination System (SPDES) permit was issued by NYSDEC in September 2006. Modifications to the permit are discussed in the Environmental Compliance Summary, Chapters 1 and 3, and in Appendix B.
- Data and text were updated throughout to reflect results from the CY 2006 environmental monitoring program. Tables, graphs, maps, supplemental information sections, and references were updated. Modifications to the environmental monitoring program are summarized in Appendix B.
- New dose-based concentration screening values for common radionuclides in soils, from guidance on decontamination and decommissioning published in 2006 by the Nuclear Regulatory Commission, were added to the table of soils screening levels in Appendix G-1.
- Meteorological wind roses, which had been removed from the ASER in 2005, were returned to Appendix I. (These figures may be useful references during incident response.)
- A list of acknowledgments was added.
- The listing of environmental laws, regulations, standards, and orders, in Table K-2 of the 2005 ASER, was deleted because the information is redundant with that in Table ECS-1 and in the "References and Bibliography" section.
- The table of derived concentration guides (DCGs; in former Table K-1) was moved to the "Useful Information" section to follow the discussion of DCGs.

SPECIAL ISSUES IN CY 2006

- By the close of CY 2006, the employees at the WVDP achieved more than four years and 4.58 million cumulative work hours without a lost-time work accident.
- An Environmental Assessment (EA) evaluating the proposed decontamination, demolition, and removal of 36 unneeded facilities at the WVDP was issued in 2006. The DOE issued a finding of no significant impact (FONSI), thereby determining that the proposed action did not constitute a major federal action significantly affecting the quality of the environment. Once the EA and FONSI were in place, work began, and several facilities were demolished and removed in 2006.

- The decommissioning, decontamination, dismantlement, and demolition (D4) project was a primary activity at the WVDP in 2006. Obsolete systems and components in the main plant and throughout the site were taken apart, packaged, and shipped off site for disposition.
- About 400,000 cubic feet (11,300 cubic meters) of radioactive and nonradioactive waste were shipped off site for disposal in 2006.
- The remote-handled waste facility, although down for repairs much of the year, processed four boxes of mixed waste in 2006.
- In 2006, the on-site laboratories were reorganized and the former Analytical and Process Chemistry Laboratory placed under the cognizance of the WVDP Environmental Laboratory (ELAB). New York State Department of Health certification was transferred to the ELAB, and radiological analyses of environmental samples were added to the certification.
- The live-fire range was investigated as a potential storm water monitoring point.
- Revisions to the draft corrective measures studies (CMSs) work plan for several solid waste management units at the WVDP were submitted to the New York State Department of Environmental Conservation (NYSDEC) in 2006. NYSDEC conditionally approved the plan in October 2006, and the work plan is being revised to address NYSDEC's conditions.
- Proposed federal legislation clarifying long-term responsibility for the WVDP had been introduced into the House of Representatives, and a companion bill introduced into the Senate in 2005. These bills remained in committee throughout 2006, and were re-introduced into both houses in 2007